Appl. No. 10/605,784
Amdt. Dated Jan. 13, 2005
Response to Office Action Dated Sept. 27, 2005

Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) 1. A method of acid fracturing a subterranean formation penetrated by a wellbore comprising:

    a) injecting a fluid comprising a solid acid-precursor at a concentration between about 0.05 and about 0.6 kg/L, at a pressure sufficient to fracture the formation, said fluid not viscosified with a viscoelastic surfactant, and

    b) allowing at least a portion of the solid acid-precursor to hydrolyze.

2. (Original) The method of claim 1 wherein the solid acid-precursor is selected from the group consisting of lactide, glycolide, polylactic acid, polyglycolic acid, copolymers of polylactic acid and polyglycolic acid, copolymers of glycolic acid with other hydroxy-, carboxylic acid-, or hydroxycarboxylic acid-containing moieties, copolymers of lactic acid with other hydroxy-, carboxylic acid-, or hydroxycarboxylic acid-containing moieties, and mixtures thereof.

3. (Currently Amended) The method of claim 2 wherein the solid acid-reactive material precursor is polylactic acid.

4. (Original) The method of claim 1 wherein the solid acid-precursor is mixed with a solid acid-reactive material.

5. (Original) The method of claim 4 wherein the solid acid-reactive material is selected from the group consisting of magnesium hydroxide, magnesium carbonate, magnesium calcium carbonate, calcium carbonate, aluminum hydroxide, calcium oxalate, calcium phosphate, aluminum metaphosphate, sodium zinc potassium polyphosphate glass, and sodium calcium magnesium polyphosphate glass.

2

Appl. No. 10/605,784
Amdt. Dated Jan. 13, 2005
Response to Office Action Dated Sept. 27, 2005

6. (Currently Amended) The method of claim 4 wherein particles of the solid acid-reactive materialprecursor are physically mixed with particles of the solid acid-reactive material.

7. (Currently Amended) The method of claim 4 wherein the solid acid-reactive materialprecursor is in the same particle as the solid acid-reactive material.

8. (Original) The method of claim 7 wherein the solid acid-reactive material is surrounded by the solid acid-precursor.

9. (Original) The method of claim 8 wherein the solid acid-precursor surrounding the solid acid-reactive material is coated with a hydrolysis-delaying material.

10. (Original) The method of claim 1 wherein the solid acid-precursor is coated with a hydrolysis-delaying material.

11. (Original) The method of claim 1 wherein the fluid further comprises a water-soluble agent that accelerates hydrolysis of the solid acid-precursor.

12. (Original) The method of claim 11 wherein the agent is selected from the group consisting of esters, diesters, anhydrides, lactones, alkali metal alkoxides, carbonates, bicarbonates, alcohols, alkali metal hydroxides, ammonium hydroxide, amides, amines, alkanol amines and mixtures thereof.

13. (Original) The method of claim 12 wherein the agent is selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonium hydroxide and propylene glycol diacetate.

14. (Original) The method of claim 1 wherein the fluid further comprises an acid.

15. (Original) The method of claim 14 wherein the acid is selected from the group consisting of hydrochloric acid, hydrofluoric acid, ammonium bifluoride, formic acid, acetic acid, lactic acid, glycolic acid, aminopolycarboxylic acids, polyaminopolycarboxylic acids, salts thereof and mixtures thereof.

16. (Original) The method of claim 1 wherein the fluid further comprises a proppant.

3

Appl. No. 10/605,784
Amdt. Dated Jan. 13, 2005
Response to Office Action Dated Sept. 27, 2005

17. (Original) The method of claim 1 wherein the fluid further comprises a viscosifier.

18. (Original) The method of claim 16 wherein the fluid further comprises a viscosifier

19. (Cancelled).

20. (Original) The method of claim 19 wherein the solid acid-precursor is present in the fluid in an amount between about 0.1 and about 0.3 kg/L.

21 – 23. (Withdrawn)

4